

What is claimed is:

1           1. A portable communication unit comprising:

2           a printed circuit board on which a radio unit composed of  
3 a transmitter and a receiver is mounted,

4           an internal antenna which is classified into an inverted  
5 F shaped antenna or a dielectric antenna,

6           an antenna metal element which is connected with a feeding  
7 point of said internal antenna at an output end thereof, and brought  
8 into contact with a feeding terminal formed on said printed circuit  
9 board at an input end thereof,

10          a front case which is provided with a data-inputting key,  
11 an information-displaying means, a speaker, and a microphone, and

12          a rear case which is provided with a space for accommodating  
13 said internal antenna, and fitted to said front case to form a  
14 casing,

15          wherein said internal antenna is supported between said rear  
16 case and said printed circuit board.

1           2. A portable communication unit according to claim 1,

2 wherein:

3           said space in said rear cover for accommodating said internal  
4 antenna is a cavity which is fit for said internal antenna.

1           3. A portable communication unit according to claim 1,

2 wherein:

3           a conductive painting is applied to a predetermined region  
4 of an inner surface of said rear case, and brought into contact

5 with a grounding pattern of said printed circuit board.

1 4. A portable communication unit according to claim 3,  
2 wherein:

3 said conductive painting is applied to a region which is  
4 opposite said radio unit at least.

1 5. A portable communication unit according to claim 3,  
2 wherein:

3 said internal antenna is composed of:

4 a radiator which is situated inside said rear case and  
5 connected with said metal element,

6 a reflecting plane which is situated opposite to said  
7 radiator maintaining a predetermined interval therebetween, and

8 connecting terminals which connect an edge of said  
9 reflecting plane with said conductive painting.

1 6. An internal antenna of a portable communication unit  
2 which is accommodated in a casing composed of a front case and  
3 a rear case together with a printed circuit board, comprising:

4 a radiator situated inside said rear case,

5 an antenna metal element which is connected with said  
6 radiator at an output end thereof, and brought into contact with  
7 a feeding terminal formed on said printed circuit board at an input  
8 end thereof,

9 a reflecting plane which is situated opposed to said  
10 radiator maintaining a predetermined interval therebetween,

11 a conductive painting which is applied to an inner surface

12 of said rear case and brought into contact with a grounding pattern  
13 of said printed circuit board, and  
14 connecting terminals which connect an edge of said  
15 referencing plane with said conductive painting via contacting  
16 means.